



Windbreak/Shelterbelt Establishment

Conservation Practice WV Job Sheet

Code380



Definition

Windbreaks or shelterbelts are plantings of single or multiple rows of trees or shrubs that are established for environmental purposes. Living snowfences are an important variation of windbreaks and shelterbelts in some parts of the country. The height of the tallest row and overall density of foliage and branches of an individual windbreak/shelterbelt planting greatly influence the size of the nearby area that is protected or sheltered.

Purpose

Windbreaks or shelterbelts are generally established to protect or shelter nearby, leeward areas from troublesome winds. Such plantings are used to reduce wind erosion, protect growing plants (crops and forage), alter microenvironment to enhance plant growth, manage snow, improve irrigation efficiency, and delineate field boundaries. Windbreaks also protect structures and livestock, provide wildlife

habitat and travel corridors, enhance aesthetics, and increase carbon storage. Also, when used as a living screen, windbreaks control views, reduce noise, and intercept chemical drift.

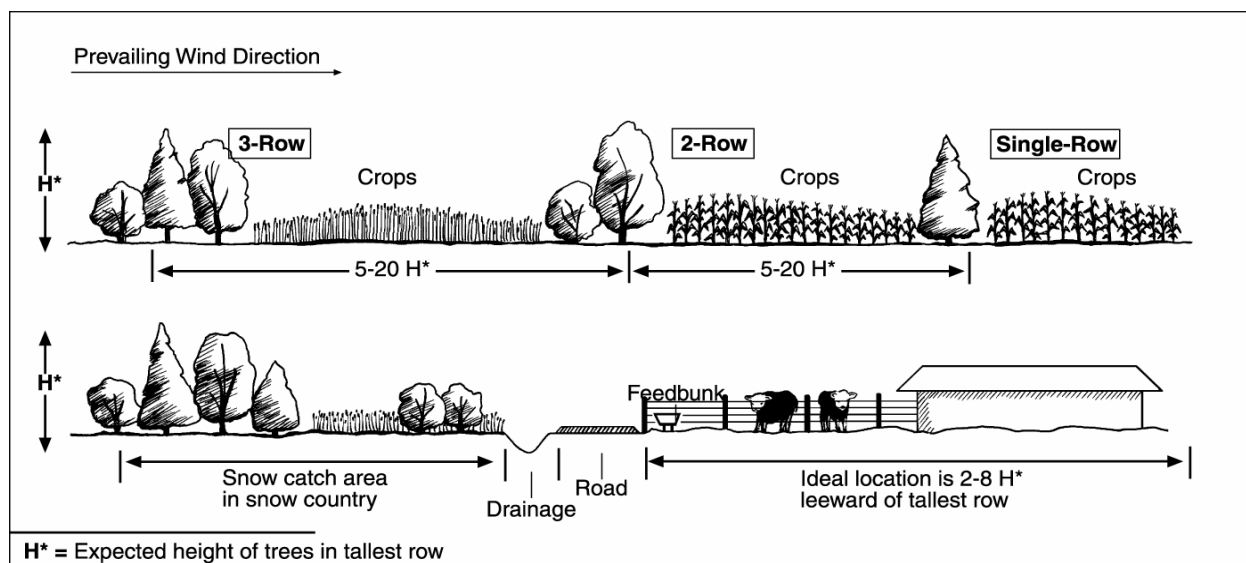
Where used

Windbreaks are “environmental buffers” that are planted in a variety of settings, such as on cropland, pasture, and rangeland (sometimes referred to as “living barns”); along roads, farmsteads, feedlots; and in urban areas.

Resource management system

Windbreaks and shelterbelts are normally established concurrently with other practices as part of a resource management system for a conservation management unit. For example, conservation crop rotation, residue

management, and windbreaks can act together to control wind erosion year-round.



A windbreak or shelterbelt usually consists of multiple rows, with shrubs in the outer rows and taller trees in the interior. Complementary practices work with these environmental buffers to further control wind erosion and snow deposition and modify site characteristics for habitat and screening purposes. For comprehensive protection of a field, windbreaks are placed in a series across the area (typically spaced at intervals of 5 to 20 times the height of each windbreak), with individual windbreaks running parallel to one another, but perpendicular to prevailing winds.

Wildlife

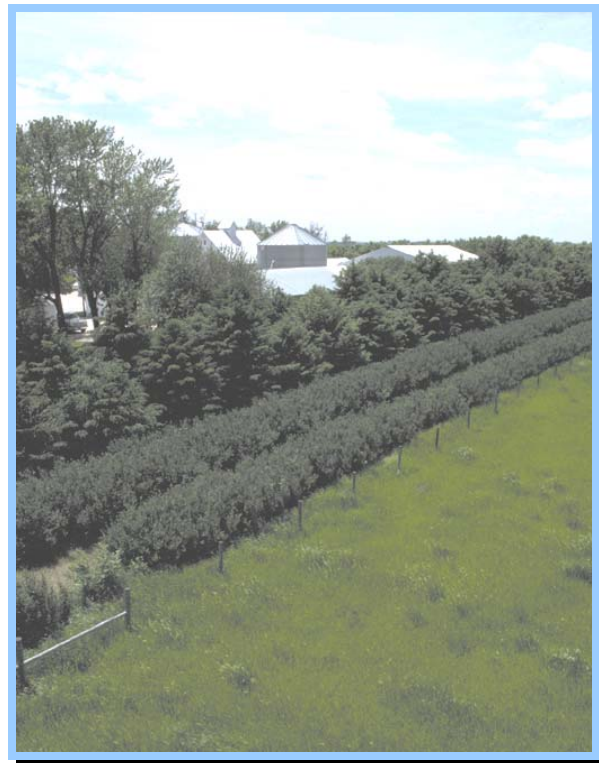
For plantings to function properly, access by livestock and certain wildlife must be managed year-round (use exclusion and fencing). Connecting shelterbelts with existing or planned perennial vegetation, such as woodlots and woody draws (tree/shrub establishment) or riparian areas (riparian forest buffer), provides additional benefits for wildlife and aesthetics. Select native or adapted species that provide wildlife food or cover.

Operation and maintenance

Trees and shrubs in a windbreak or shelterbelt need periodic maintenance and, later on, possible renovation (tree/shrub pruning and windbreak/shelterbelt renovation). In some areas windbreaks may need supplemental water for successful establishment.

Specifications

Site-specific requirements are listed on the specifications sheet. Additional provisions are entered on the job sketch sheet. Specifications are prepared in accordance with the NRCS Field Office Technical Guide. See practice standard Windbreak/ Shelterbelt Establishment, code 380.



This multiple-row windbreak protects the adjacent farmstead and provides important wildlife habitat.

Windbreak/Shelterbelt Establishment – WV Job Sheet

Client:	Farm #:
Field(s):	Tract #:
Designed By:	Location:
Date:	Total Acres:

Purpose (check all that apply)	
<input type="checkbox"/> Reduce soil erosion from wind	<input type="checkbox"/> Provide living noise screens
<input type="checkbox"/> Protect plants from wind-related damage	<input type="checkbox"/> Provide living visual screens
<input type="checkbox"/> Alter microenvironment for enhancing plant growth	<input type="checkbox"/> Improve air quality by reducing and intercepting airborne particulate matter, chemicals and odors
<input type="checkbox"/> Manage snow deposition	<input type="checkbox"/> Delineate property and field boundaries
<input type="checkbox"/> Provide shelter for structures, livestock, and recreational areas	<input type="checkbox"/> Improve irrigation efficiency
<input type="checkbox"/> Enhance wildlife habitat by providing travel corridors	<input type="checkbox"/> Increase carbon storage in biomass and soils
	<input type="checkbox"/> Address environmental and production concerns of poultry operations

Location and Layout	
Width (feet; include widths of maintenance areas next to outer rows):	
Length (feet):	Area (acres):
Total area of zone protected/sheltered (acres; based on expected height and density of the windbreak/shelterbelt):	
Additional requirements:	

Woody Plant Materials Information					
Species/cultivar by row number:	Kind of stock ¹ :	Planting Dates	Distance between plants within row (ft):	Total number of plants for row:	Distance (ft) from this row to next row ² :
1					
2					
3					
4					
5					
6					
7					

¹BA=bareroot, CO=container, CU=cutting; include size, caliper, height, and age as applicable. ²Adjusted for width of maintenance equipment.

Temporary Storage Instructions
Planting stock that is dormant may be stored temporarily in a cooler or protected area. For stock that is expected to begin growth before planting, dig a V-shaped trench (heeling-in-bed) sufficiently deep and bury seedlings so that all roots are covered by soil. Pack the soil firmly and water thoroughly. Additional requirements:
Site Preparation
See Tree/Shrub Site Preparation narrative and/or WV Job Sheet – 490. Additional requirements:
Planting Methods
See Tree/Shrub Establishment narrative and/or WV Job Sheet – 612. Additional requirements:
Protection Methods - See the following as appropriate:
Tree/Shrub Establishment narrative and/or WV Job Sheet – 612 Use Exclusion narrative and/or WV Job Sheet – 472 Fence narrative and/or WV Job Sheet -382 Additional requirements:
Operation and Maintenance
Replacement of dead trees or shrubs will be continued until the windbreak/shelterbelt is functional. Supplemental water will be provided as needed. Thin or prune the windbreak/shelterbelt to maintain its function. Inspect trees and shrubs every 6 months and protect from adverse impacts including insects, diseases, or competing vegetation. Plantings should also be checked after storm events. The trees or shrubs will also be protected from fire and damage from livestock and wildlife. Periodic applications of nutrients may be needed to maintain plant vigor. Where practical, management activities will be performed outside the primary nesting season March 15 – July 15. An exception may be for mowing or cultivation to control vegetative competition. Additional operation and maintenance requirements may be developed on a site- specific basis to ensure performance of the practice as intended:

If needed, an aerial view or a side view of the practice can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included.

Questions regarding the planning, application or maintenance of the Windbreak/Shelterbelt Establishment should be directed to:

_____ at _____

Additional Specifications and Notes:

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